

Talk Title: Cohomology of the spaces of commuting elements

Abstract: The space of commuting elements in a Lie group is identified with the based moduli space of flat bundles over a torus, so this space is studied in many fields. Baird proved that its rational cohomology is identified with a certain ring of invariants of the Weyl group. Therefore its cohomology connects combinatorics, representation theory, and topology.

I will talk about the Poincaré series and a minimal generating set of the rational cohomology of the space of commuting elements and some applications. This talk is based on a joint work with Daisuke Kishimoto